

THE WATER HYACINTH MOTH

(*Niphograptia albiguttalis*)

A natural enemy of WATER

HYACINTH (*Eichhornia crassipes*)

in South Africa

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DOSSIERS ON BIOLOGICAL CONTROL AGENTS AVAILABLE TO AID ALIEN PLANT CONTROL

DESCRIPTION

Adult moths are 6-10 mm in length with a wingspan of 17 - 25 mm. The colour of the moth varies between golden yellow and charcoal grey with brown, black and white markings. The larvae are very small, 1mm in the first instar (growth stage) and 5mm in later instars. They are creamy white with black markings. The larvae feed inside the petioles (leaf stems).

LIFE CYCLE

The adults are nocturnal and live only 4-9 days during which time they do not feed. Females lay an average of 370 eggs during their life. The eggs are deposited singly or in a small group in leaf tissue, usually in existing leaf injuries, abrasions or weevil feeding scars. The eggs hatch after 5-10 days. There are five larval instars, taking 16 - 21 days to complete. The first instar larvae feed on the leaf surface and after 1-2 days bore into the petioles (leaf stems) and buds, causing transparent areas in the outer petiole surface. Late instar larvae burrow into the crown, destroying the buds of the plant, preventing its growth. Larvae have been recorded on plants with bulbous and elongated petioles, but the plants must be healthy and actively growing. The fully developed larva exits the petiole where it has been feeding and burrows into a relatively undamaged petiole where it pupates. The adult emerges after about 5-7 days.

IMPACT ON WATER HYACINTH

Damage causes the water logging of petiole and the plant sinks. Older larvae destroy the growth tips. One larva may damage more than one petiole or plant before it pupates. When the growing conditions are ideal, the water hyacinth moth will undergo several generations in a season, and, combined with its high fecundity, can rapidly reach high population levels. Damage to the plants can be severe, but the impacts are often patchy, seasonal and temporary. The insect seems to prefer young growing plants. Under the correct environmental conditions, this agent, in combination with the other biological control agents that have been released on water hyacinth can bring the weed under complete control. Under these conditions no other control methods should be required.



Adult water hyacinth moth



Frass and larva in the water hyacinth petiole



Damage by larva to the water hyacinth



Author: HARDI OBERHOLZER, Agricultural Research Council, PPRI, Weeds Research Division, Private Bag X 134, Pretoria, 0001

ADDITIONAL INFORMATION IS AVAILABLE. PHONE: Weedbuster Toll-free Helpline: 0800 005 376
WEBSITE: PPRI website is located via links from the Agricultural Research Council website: www.arc.agric.za

